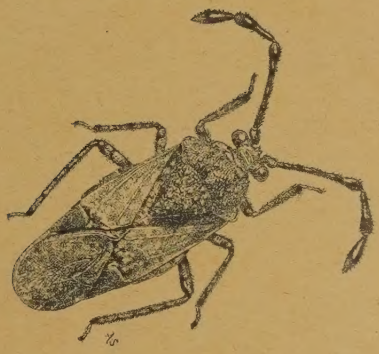
TECHNICAL BULLETIN No. 2

WEST AFRICAN CACAO RESEARCH INSTITUTE



CAPSIDS AND CAPSID CONTROL

IN THE

BELGIAN CONGO

WITH ESPECIAL REFERENCE TO LUKOLELA PLANTATIONS

J. NICOL and
D. J. TAYLOR

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WEST AFRICAN CACAO RESEARCH INSTITUTE

The West African Cacao Research Institute was founded in 1944 and is incorporated by the West African Cocoa Research Institute Ordinance, 1947 in the Gold Coast. It has legal status in Nigeria also by virtue of the West African Cocoa Research Institute (Nigerian Status) Ordinance, 1950.

The Institute is financed partly from funds set aside by the former West African Cocoa Control Scheme and partly from grants provided by the Gold Coast and Nigerian Cocoa Marketing Boards.

Its research programme is designed to study all the fundamental problems which affect the cocoa crop in West Africa and, in particular, to work out ways and means of applying scientific principles and the results of scientific research to the day-to-day problems of the cocoa grower.

The main research station is situated at Tafo, Gold Coast, some seventy miles north of Accra and a sub-station has been opened at Ibadan, Nigeria. The Institute is engaged solely on research work and has no executive authority or direct responsibility for extension work in the countries which it serves. Visits to the Institute from farmers are welcomed and are, indeed, organised by the Departments of Agriculture, but the results of research at the Institute are made available to the cocoa growers through the officers of the Departments of Agriculture.

The Senior Research Staff consists mainly of officers of the Colonial Agricultural and Colonial Research Services. Two scholarships are offered to citizens of the Gold Coast and Nigeria to provide post-graduate training of a standard to qualify them for the Institute's service. Particulars of these awards may be obtained from the Director.

Fig. 1. Mature cocoa at Lukolela Plantation.

D. J. Taylor.

Fig. 2. Operators demonstrating the hand bellows dusters.

D. J. Taylor.

(ii) The trees are kept low and laterally branching by regularly pruning the developing chupons. This permits the close inspection of all pods and branches, and also makes the treatment with hand dusters an effective measure.

(iii) The operation of the hygiene gangs in the blocks throughout the year ensures continuity of the control measures.

It is evident that, since none of these conditions obtains in the Gold Coast or Nigeria, the methods described could not be applied there without a major revolution in the system of cocoa production. It is also evident that, since all the existing population of cocoa in the Gold Coast consists of tall trees, the methods cannot be adapted to the existing cocoa at all.

A method depending essentially on regular pruning, inspection and sanitation demands an intensive system of cultivation which is alien to the traditional methods employed by the farmers of West Africa. At the same time, the increasing menace of pests and diseases of cocoa, the urgent necessity of making the optimum use of the land and of increasing its productivity, indicate that more intensive methods must be used if the cocoa industry is to survive beyond the immediately foreseeable future. There is every reason, therefore, to investigate the practicability of the method used in the Belgian Congo in local conditions.

If the method can be so applied, then a definite objective is in view to which an agricultural development policy might be directed. Experimental work has already been commenced at this Institute with the object of determining: first, if the yield of trees whose vertical growth is stopped at the first jorquette is as great as that of unpruned trees and, secondly, if the general level of capsid populations in the Gold Coast is such that the insects can be controlled with simple equipment. The applicability of the methods described to "fan cuttings" also requires examination since it is at least conceivable that cuttings may have all the desired qualities of pruned seedlings and some virtues of their own in addition.

Two important points should, however, be borne in mind viz., that the methods described demand intensive cultural treatment and that the search for methods for the control of capsids on the existing trees must be continued, even if they are to be abandoned at a later stage when intensive methods may have become general.

The writers are indebted to M. Poincin, Manager of the Lukolela Plantation, for his interest in and assistance to their mission and for his hospitality. They also wish to express their gratitude to Mr. A. Pickles, Acting Director of the West African Cocoa Research Institute, for his helpful criticism of this paper.

REFERENCES

ANON. (1949) .. .. Annual Report, West African Cacao Research Institute, April 1947—March 1948. pp. 50–55.

ANON. (1950) .. .. *Ibid.* April 1948—March 1949, pp. 35–6.

BELLEFROID, M. V. de (1951) .. .. A note on *Sahlbergella singularis*. Report of the Cocoa Conference held at Grosvenor House, London, W.1., 11th to 13th September 1951. Cocoa, Chocolate and Confectionery Alliance Limited.

BELLEFROID, M. V. de (1953) .. .. A note on *Sahlbergella singularis*. Report of the Cocoa Conference held at Grosvenor House, London, W.1., 15th to 17th December 1953. Cocoa, Chocolate and Confectionery Alliance Limited.

BREDO, H. J. (1931) .. Contribution a l'étude de *Sahlbergella singularis* Hage. Bull. agric. Congo Belge 22 No. 1 March 1931.

HALE, S. L. (1953) .. World Production and Consumption—1951 to 1953. Proceedings of the Cocoa Conference held at Grosvenor House, London, W.1., 15th to 17th September 1953. London, 1953.

MAYNE, R., and Ghesquière, J. (1934) Hemiptères nuisibles aux vegetaux du Congo Belge. Annales de Gembleux, Brussels, Jan. 1934.

Waterlow & Sons Limited, London and Dunstable.